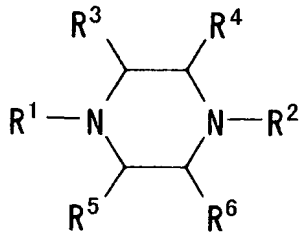
Scope of Claims

[1] A flexible polyurethane foam obtained by contacting a polyol composition (A) comprising a polyether polyol (polyol (D)) having an amine value of 400 to 600 mg KOH/g and a hydroxyl value of 350 to 700 mg KOH/g, which is produced by addition of an alkylene oxide to at least one amine compound selected from the amine compounds represented by formulas (1) and (2) below, with an organic polyisocyanate.

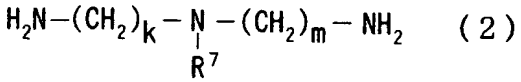
[Formula 7]



(1)

(wherein R^1 and R^2, which may be the same or different, each represents H or a group shown by $-(CH)_n-NH_2$ (wherein n is an integer of 1 to 3) and R^3 - R^6, which may be the same or different, each represents H or a straight or branched alkyl group or alkenyl group of 1 to 4 carbon atoms.)

[Formula 8]



(2)

(wherein R^7 represents a straight or branched alkyl group or alkenyl group of 1 to 4 carbon atoms, and k and m represent an integer of 1 to 6.)

[2] The flexible polyurethane foam according to claim 1, wherein the polyol composition (A) is a polyol composition consisting of 0.5 to 3 parts by weight of the polyol (D), 0 to 99.5 parts by weight of the polyol (B) defined below and 0 to 99.5 parts by weight of the polyol (C) defined below (provided that (B), (C) and

(D) are in such a ratio that the sum is 100 parts by weight).

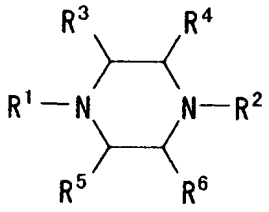
Polyol (B): a polyether polyol having a hydroxyl value of 20 to 60 mg KOH/g and an average functional group number of 2 to 4.

Polyol (C): a polymer-dispersed polyol which comprises dispersing 5 to 50 wt% of a polymer (C-2) obtained by polymerization of an ethylenic unsaturated monomer in a polyether polyol (C-1) having a hydroxyl value of 20 to 60 mg KOH/g and an average functional group number of 2 to 4.

[3] The flexible polyurethane foam according to claim 1 or 2, wherein the amino compound represented by (1) above is 1-(2-aminoethyl)piperazine and the amino compound represented by (2) above is methyliminobispropylamine.

[4] A polyol composition comprising 0 to 99.5 parts by weight of a polyol (B) having a hydroxyl value of 20 to 60 mg KOH/g and an average functional group number of 2 to 4, 0 to 99.5 parts by weight of a polyol (C), which is a polymer-dispersed polyol which comprises dispersing 5 to 50 wt% of a polymer (C-2) obtained by polymerization of an ethylenic unsaturated monomer in a polyether polyol (C-1) having a hydroxyl value of 20 to 60 mg KOH/g and an average functional group number of 2 to 4, and 0.5 to 3 parts by weight of a polyol (D), which is a polyether polyol having an amine value of 400 to 600 mg KOH/g and a hydroxyl value of 350 to 700 mg KOH/g, produced by addition of an alkylene oxide to at least one amine compound selected from the amine compounds represented by formulas (1) and (2) below, wherein (B), (C) and (D) are in such a ratio that the sum is 100 parts by weight.

[Formula 9]



(1)

(wherein R^1 and R^2, which may be the same or different, each represents H or a group shown by $-(CH)_n-NH_2$ (wherein n is an integer of 1 to 3) and R^3 - R^6,

which may be the same or different, each represents H or a straight or branched alkyl group or alkenyl group of 1 to 4 carbon atoms.)

[Formula 10]

$$H_2N-(CH_2)_k-\underset{\underset{R^7}{|}}{N}-(CH_2)_m-NH_2 \quad (2)$$

(wherein R^7 represents a straight or branched alkyl group or alkenyl group of 1 to 4 carbon atoms, and k and m represent an integer of 1 to 6.)

[5] A seat pad for automobile comprising the flexible polyurethane foam according to any one of claims 1 through 3.

[6] The seat pad for automobile according to claim 5, wherein a core density of the seat pad is 30 kg/m^3 to 60 kg/ m^3, a 25% ILD hardness is 150 to 300 N/314 cm^2 and a wet heat compression set ratio is not greater than 20%.

[7] The seat pad for automobile according to claim 5, wherein the core density of the seat pad is 20 kg/m^3 to 45 kg/ m^3, the 25% ILD hardness is 50 to 200 N/314 cm^2 and the wet heat compression set ratio is not greater than 30%.

[8] The seat pad for automobile according to any one of claims 5 through 7, wherein volatile amine components in the seat pad are 0 to 200 ppm.

[9] A sound absorbing material comprising the flexible polyurethane foam according to any one of claims 1 through 3.

[10] The sound absorbing material according to claim 9, wherein volatile amine components in the sound absorbing material are 0 to 200 ppm.